



**PvuI (7)**  
**SgfI (6)**
**MfeI (82)**

1 GGATCTGCGATCGCTCCGGTGCCCGTCAGTGGGAGAGCGCACATCGCCACAGTCCCCGAGAAGTTGGGGGAGGGGTGCGCAATTGAACGGGTGCCTA

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101 GAGAAAGTGGCGCGGGTAAACTGGAAAAGTATGTCGTGACTGGCTCCGCCTTTTCCGAGGGTGGGGGAGAACCCTATATAAGTGCAGTAGTCGCC

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**Psp1406I (203)**
**PvuII (239)**
**Bsu36I (291)**

201 GTGAACGTTCTTTTTCGCAACGGGTTTGCCGCCAGAACACAGCTGAAGCTTCGAGGGCTCGCATCTCTCCTTCACGCGCCGCCCTACCTGAGGCC

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301 GCCATCCACGCCGGTTGAGTCGCGTTCTGCCGCTCCCGCTGTGGTGCTCCTGAACTGCGTCGCGCTCTAGGTAAGTTTAAAGCTCAGGTCGAGACC

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401 GGGCCTTTGTCCGGCGCTCCCTTGAGCCTACCTAGACTCAGCCGGCTCTCCACGCTTTGCTGACCCTGCTTGTCAACTCTACGCTTTTGTTCGTTT

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**BstEII (555)**  
**AgeI (552)**
**NcoI (560)**

501 TCTGTTTGTGCGCGTTACAGATCCAAGCTGTGACCGGCGCTACCTGAGATCACCGGTACCCTGAGCTGCTGAAGAAGACCTCACATGCCCAATTG

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1▶ M E L L E E D L T C P I C

**EcoRI (690)**

601 CTGCAGTTTGTGATGACCCCCGAGTGTGCCCTGCTCACACAACTTCTGCAAAAAATGCTTAGAAGGGCTCTTAGAGGGGAATGTGCGGAATCCCTG

13▶ C S L F D D P R V L P C S H N F C K K C L E G L L E G N V R N S L

701 TGGAGACCATCTCCCTTCAAGTGCCTACCTGCCGTAAGGAAACCTCAGTACTGGAGTCAACAGTCTGCAGGTCAATTACTCCCTAAAGGGTATCGTGG

47▶ W R P S P F K C P T C R K E T S A T G V N S L Q V N Y S L K G I V

**PvuII (892)**

801 AGAAATACAACAAAATCAAGATTTCTCCAAGATGCCAGTGTGCAAGGACATTTGGGGCAGCCTCTCAACATCTTCTGCGTAACTGATATGCAGCTGAT

80▶ E K Y N K I K I S P K M P V C K G H L G Q P L N I F C V T D M Q L I

901 TTGTGGGATCTGTGCTACTCGAGGCGAGCACACCAAGCATGTCTTCTTCTATTGAAGATGCCTACGCTCGAGAAAAGAATGCCTTTGAGTCCCTCTTT

113▶ C G I C A T R G E H T K H V F S S I E D A Y A R E K N A F E S L F

1001 CAGAGTTTCGAGACTTGGCGCCGGGAGATGCTTTTTCCCGCTGGATACTTTGGAACAAACAAGAGGAAAGCCCTCCAGTTACTCACGAAGGATTCAG

147▶ Q S F E T W R R G D A L S R L D T L E T N K R K A L Q L L T K D S

1101 ATAAAGTAAAGGATTTTTGAGAAGTTACAGCACACCTTGGATCAAAAAGAAGAATGAAATCCTGTGACTTTGAACTATGAAGCTTGCAGTTATGCA

180▶ D K V K E F F E K L Q H T L D Q K K N E I L S D F E T M K L A V M Q

1201 AACCTATGACCCGGAGATCAACAAAATCAACACTATTTTACAGGAGCAGCGGATGGCCTTCAACATTGCTGAGGCTTTCAAAGATGTCTCAGAACCTATT

213▶ T Y D P E I N K I N T I L Q E Q R M A F N I A E A F K D V S E P I

1301 ATATTTTTGCAACAGATCAAGAGTTTACGGGAGAAAATCAAAGTAATCAAGGAAACTCTTTGCCACACTCTAATTTGCCACAAGCCCTTTAATGAAGA

247▶ I F L Q Q M Q E F R E K I K V I K E T P L P H S N L P T S P L M K

**SpeI (1431)**
**Acc65I (1496)**

1401 ACTTTGATACCAGTCAGTGGGAGACATTAAGTGTGATAAACTGTCTTTGCCGCAAGACACAGGTGTGTTCACTAGCAAGATCCCTGGTA

280▶ N F D T S Q W G D I K L V D V D K L S L P Q D T G V F T S K I P W Y

**BspHI (1514)**
**XcmI (1556)**

1501 CCCATCTGCTGCTCATGATGGTAGTCTGCTGGTCTCCTCATATCTTTGGCCCCACTGTATTCTGGAATGGTCTCCACTTGATGAATTGGCAACT

313▶ P Y L L L M M V V L L G L L I F F G P T V F L E W S P L D E L A T

**Tth111I (1635)**

1601 TGGAAAGACTATCTTTCAAGCTTCAATCTTACCTGACTAAGTCTGCTGATTTTATAGAACAATCTGTTTTTACTGGGAACAGATGACAGATGGGTTTT

347▶ W K D Y L S S F N S Y L T K S A D F I E Q S V F Y W E Q M T D G F

1701 TCATTTTTGGTGAAGAGTAAAAATGTAGTTTGGTGGCACTGAACAATGTGGCAGAGTTTATATGCAAATACAAACTATTATAAGTCTTTCAATTAC

380▶ F I F G E R V K N V S L V A L N N V A E F I C K Y K L L •

**MscI (1828)**
**NheI (1822)**

1801 ACAGTTCTGCTTCTGATGGGAGCTAGCTGGCCAGACATGATAAGATACATTGATGAGTTTGGACAAACCACAACCTAGAATGCAGTGAAAAAATGCTTT

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**HpaI (1960)**
**MfeI (1971)**

1901 ATTTGTGAAATTTGTGATGCTATTGCTTTATTTGTAACCATTATAAGCTGCAATAACAAGTTAACAACAACAAATTGCATTCATTTTATGTTTCAGTTTC

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**EcoRI (2056)**

2001 AGGGGGAGGTGTGGGAGGTTTTTAAAGCAAGTAAACCTCTACAAATGTGGTATGGAATTCTAAAATACAGCATAGCAAACTTTAACCTCCAAATCAA

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2101 GCCTCTACTTGAATCCTTTTCTGAGGGATGAATAAGGCATAGGCATCAGGGGCTGTGCAATGTGCATTAGCTGTTTGCAGCCTCACCTTCTTTCATGG

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**SapI (2238)**
**SspI (2295)**

2201 AGTTAAGATATAGTGATTTTCCCAAGGTTTGAACAGCTCTTCATTCTTTATGTTTTAAATGCACTGACCTCCACATTCCTTTTATAGTAAAATAT

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**SwaI (2309)**
**EcoO109I (2370)**

2301 TCAGAAATAATTTAAATACATCATTGCAATGAAAATAAATGTTTTTATTAGGCAGAAATCCAGATGCTCAAGGCCCTCATAATATCCCCAGTTTAGTA

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2401 GTTGGACTTAGGGAACAAAGGAACCTTAAATAGAAATGGACAGCAAGAAAGCGAGCTTCTAGCTTTAGTTCCTGGTGTACTTGAGGGGGATGAGTTCCT

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141▶ • N R T Y K L P I L E E

2501 CAATGGTGGTTTTGACCAGCTTGCCATTCATCTCAATGAGCACAAAGCAGTCAGGAGCATAGTCAGAGATGAGCTCTCTGCACATGCCACAGGGGCTGAC  
129 I T T K V L K G N M E I L V F C D P A Y D S I L E R C M G C P S V  
2601 CACCTGATGGATCTGTCCACCTCATCAGAGTAGGGGTGCCTGACAGCCACAATGGTGTCAAAGTCCTTCTGCCCCTTGTCTCACAGCAGACCCAATGGCA  
96 V R I S R D V E D S Y P H R V A V I T D F D K Q G N S V A S G I A

**StuI (2734)**

2701 ATGGCTTCAGCACAGACAGTGCCTGCCAATGTAGGCCTCAATGTGGACAGCAGAGATGATCTCCCAGTCTTGGTCTGATGGCCGCCCGACATGGT  
62 I A E A C V T V R G I Y A E I H V A S I I E G T K T R I A A G V H H

**XmnI (2876)**

2801 GCTTGTGCTCATAGAGCATGGTATCTTCTCAGTGGCGACCTCCACCAGCTCCAGATCTGCTGAGAGATGTTGAAGTCTTCATGGTGGCCCTCCT  
29 K N D E Y L M T I K E T A V E V L E L D Q Q S I N F T K M

**AseI (2942)**

2901 ATAGTGAGTCGTATTATACTATGCCGATATACTATGCCGATGATTAATTGTCAAACACAGCGTGGATGGCGTCTCCAGCTTATCTGACGGTTCATAAACC  
SpeI (2999)

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3001 AGCTCTGCTTATATAGACCTCCACCGTACACGCCTACCGCCATTTGCGTCAATGGGGCGGAGTTGTTACGACATTTTGAAAGTCCCGTTGATTTACT  
SpeI (3097)

3101 AGTCAAAACAACTCCCATTGACGTCAATGGGTGGAGACTTGAAATCCCCGTGAGTCAAACCGCTATCCACGCCATTGATGACTGCCAAAACCGCA

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**SnaBI (3225)**

3201 TCATCATGGTAATAGCGATGACTAATACGTAGATGTACTGCCAAGTAGGAAAGTCCATAAGGTCATGTACTGGGCATAATGCCAGGCGGGCCATTACC

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**NdeI (3330)**

3301 GTCATTGACGTCAATAGGGGGCTACTTGCCATATGATACACTTGATGTACTGCCAAGTGGGCGAGTTACCGTAAATACTCCACCCATTGACGTCAATGG  
3401 AAAGTCCCTATTGGCGTTACTATGGGAACATACGTCATTATTGACGTCAATGGGCGGGGTGCTTGGGCGGTGAGCCAGGCGGGCCATTACCCTAAGTT

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**PacI (3516)**

**SdaI (3508)**      **BspLU11I (3526)**

3501 ATGTAACGCTGCAGGTTAATAAGAACATGTGAGCAAAGGCCAGCAAAGGCCAGGAACCGTAAAAAGGCCGCTTGTGGCGTTTTTCCATAGGCTC  
3601 CGCCCCCTGACGAGCATCACAAAAATCGACGCTCAAGTCAGAGGTGGCGAAACCCGACAGGACTATAAAGATACCAGGCGTTTCCCCTGGAAGCTCCC  
3701 TCGTGGCTCTCCTGTTCCGACCCTGCCGTTACCGGATACCTGTCCGCTTTCTCCCTTCGGAAGCGTGGCGCTTTCTCATAGCTCAGCTGTAGGTA

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**ApaLI (3840)**

3801 TCTCAGTTCGGTGTAGGTCGTTCCGCTCCAAGCTGGGCTGTGTGCACGAACCCCCGTTGAGCCGACCGTGCCTTATCCGGTAACTATCGTCTTGAG  
3901 TCCAACCCGTAAGACACGACTTATCGCCACTGGCAGCAGCCACTGGTAACAGGATTAGCAGAGCGAGGTATGTAGCGGTGCTACAGAGTCTTGAAGT  
4001 GGTGGCCTAACTACGGCTACACTAGAAGAACAGTATTTGGTATCTGCGCTCTGCTGAAGCCAGTTACCTTCGAAAAAGAGTTGGTAGCTCTTGATCCGG  
4101 CAAACAAACCACCGCTGGTAGCGGTGGTTTTTTTTGTTTGAAGCAGCAGATTACGCGCAGAAAAAAGGATCTCAAGAAGATCCTTTGATCTTTCTACG

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**EagI (4276)**

**PacI (4256)**    **SwaI (4265)**    **NotI (4275)**

4201 GGGTCTGACGCTCAGTGGAAACGAAAACCTCACGTTAAGGGATTTTGGTCATGGCTAGTTAATTAACATTTAATCAGCGGCCGCAATAAAATATCTTTATT  
4301 TTCATTACATCTGTGTGTTGTTTTTGTGTGAATCGTAACTAACATACGCTCTCCATCAAACAAAACGAAACAAAACAACTAGCAAATAGGCTGTC  
4401 CCCAGTGAAGTGCAGGTGCCAGAACATTTCTCTATCGAA